Name: _____ Date: _____

Arithmetic and Geometric Sequences Practice Worksheet

For each Sequence, Pattern, Table, or Story below identify whether it is Arithmetic or Geometric, find the common difference or common ratio, write an Explicit Formula, then use your formulas to find the given term.

Representation	Arithmetic or Geometric	Common Difference or Ratio	Recursive Formula	Explicit Formula	Given Term
1. -6, 12, -24, ...					a_{10}
2. 1, 3, 9, 27, ...					a_5
3. -10, -8, -6, -4, ...					a_{56}
4. 72, 48, 24, ...					a_5
5. -31, -23, -15, ...					a_{32}
6. -4, -12, -36, ...					a_3
7. -2, -10, -50, ...					a_7
8. 5, 11, 17, ...					a_{15}
9. 4, 24, 144, ...					a_8
10. 21, 16, 11, ...					a_{11}

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Sequences

Write the first five terms of the sequence. Identify the domain and range.

1. $a_n = 6n$

2. $a_n = 2 - n$

3. $a_n = 5n + 1$

4. $a_n = 3n + 4$

5. $a_n = \frac{n}{2}$

6. $a_n = -7n - 8$

7. What is the seventh term of the sequence $a_n = \frac{n+3}{2n}$

a. $\frac{5}{7}$ b. 5 c. 10 d. 14

For each sequence, describe the pattern, write the next term, and write a rule for the n^{th} term.

8. $-2, -5, -8, -11, \ldots$

9. $1, 16, 31, 46, \ldots$